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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,094	09/08/2003	Li-Ting Chen	ALIP0031USA	2093
27765	7590	09/21/2006	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116				GUPTA, PARUL H
		ART UNIT		PAPER NUMBER
		2627		

DATE MAILED: 09/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/605,094	CHEN ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Parul Gupta	2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 31 July 2006.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-12 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) All    b) Some \* c) None of:

        1. Certified copies of the priority documents have been received.

        2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

        3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
    Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
    Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_.

## DETAILED ACTION

1. Claims 1-12 are pending for examination as interpreted by the examiner. The amendment filed on 8/8/06 was considered.

### *Drawings*

2. The drawings are objected to because of minor typographical errors such as the misspelling of "compensator" in element 42 of figure 5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. Figures 1-5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

4. The amendment filed 8/8/06 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: see 112, 1<sup>st</sup> paragraph rejection below. Applicant is required to cancel the new matter in the reply to this Office Action.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1, as currently amended, recites a band-pass filter “for providing phase-lag compensation”. The Applicant submits on page 4, paragraph 3 of the arguments that this limitation is supported in paragraph 29 of the specification. The Examiner disagrees. Paragraph 29, at most, discloses a band-pass filter in charge with a compensation process of a rotating frequency error signal. It is not disclosed that this band-pass filter provides “phase-lag” compensation as the Applicant alleges. Furthermore, the Applicant is directed to paragraph 0026, last three lines of the specification, which discloses that “the compensator circuit 56 of the system 50 comprises the band-pass filter 64 instead of a phase-lag compensator”. Finally, the Applicant is directed to the previous version of claim 1 (which is part of the disclosure as originally filed), last line, which recites “the compensator circuit not comprising any phase-lag compensator”, which clearly indicates that the band-pass filter does not provide phase-lag compensation. Therefore, the newly-added claim limitations constitute new matter.

Claim 9 has limitations similar to those of claim 1.

Claims 2-8 & 10-12 are dependent upon rejected base claims.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, as currently amended, recites on lines 5-6 a band-pass filter "for providing phase-lag compensation", which is contradictory to what is recited on the last line, i.e., the compensator circuit not comprising any phase-lag compensator, rendering claim 1 indefinite.

Claim 9 has limitations similar to those of claim 1.

Claims 2-8 & 10-12 are dependent upon rejected base claims.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chu, US Patent 6,459,665 in view of Roberts et al., US Patent 5,499,785.

Regarding claim 1, Chu teaches in figure 3B a compensator circuit for compensating an error signal generated by an optical storage device, the compensator circuit comprising: a phase-lead compensator (30') for receiving the error signal and generating a phase-lead error signal; a band-pass filter (34') connected in parallel with the lead compensator for magnifying a rotating frequency error signal and generating a filtered signal (column 4, lines 64-67); and an adder (shown between 32' and 34') for adding the phase-lead error signal and the filtered signal so as to lower a steady state error of the error signal. Chu does not teach that the band-pass filter can be used to provide phase-lag compensation. Roberts et al. teaches in figure 6 (explained in column

11, lines 33-38) a bandpass filter (183) that includes the function of a lag compensator (186). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the concept of a band-pass filter can be used to provide phase-lag compensation as taught by Roberts et al. into the system of Chu. The motivation would be to prevent electrical noise and load vibration from causing bad conditions of the signal (column 11, lines 37-43 of Roberts et al.).

Regarding claim 2, Chu teaches the compensator circuit of claim 1, wherein the phase-lead compensator is a differentiator (column 4, lines 23-27).

Regarding claim 3, Chu teaches the compensator circuit of claim 1 is installed inside an optical storage device (column 4, lines 9-12).

Regarding claim 4, Chu teaches the compensator circuit of claim 3, wherein the optical storage device is a DVD-ROM drive (column 4, lines 9-12).

Regarding claim 5, Chu teaches the compensator circuit of claim 3, wherein the optical storage device is a CD-ROM drive (column 4, lines 9-12).

Regarding claim 6, Chu teaches the compensator circuit of claim 3, wherein the optical storage device is a CD-RW drive. Column 4, lines 9-12 describe the different devices that are included. CD-RWs serve the same purpose as CD-ROMs in regards to phase compensation. Thus, it is inherent to include them as a device that can be used in the invention.

Regarding claim 7, Chu teaches the compensator circuit of claim 3, wherein the optical storage device is a DVD-RW drive. Column 4, lines 9-12 describe the different devices that are included. DVD-RWs serve the same purpose as DVD-ROMs in regards

to phase compensation. Thus, it is inherent to include them as a device that can be used in the invention.

Regarding claim 8, Chu teaches the compensator circuit of claim 3, wherein the optical storage device further comprises a pickuphead (column 1, lines 32-35).

Regarding claim 9, Chu teaches the method of implementing the compensator circuit as recited in claim 1. See the rejection for claim 1.

Regarding claim 10, Chu teaches the method of claim 9, wherein the phase-lead compensator is a differentiator (column 4, lines 23-27).

Regarding claim 11, Chu teaches the compensator circuit of claim 1 wherein the band-pass filter amplifies the rotating frequency error signal (column 4, lines 47-54). Chu does not teach that the band-pass filter can be used to provide phase-lag compensation. Roberts et al. teaches in figure 6 (explained in column 11, lines 33-38) a bandpass filter (183) that includes the function of a lag compensator (186). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the concept of a band-pass filter can be used to provide phase-lag compensation as taught by Roberts et al. into the system of Chu. The motivation would be to prevent electrical noise and load vibration from causing bad conditions of the signal (column 11, lines 37-43 of Roberts et al.).

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chu in view of Roberts et al., further in view of Nakagawa et al., US Patent 5,760,511.

Regarding claim 12, Chu teaches the compensator circuit of claim 1. Chu does not but Nakagawa et al. teaches a circuit wherein the band-pass filter operates in a

frequency range outside of an operational range of the phase-lead compensator (column 2, lines 25-42). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the concept of having the different elements operate in different frequency ranges as taught by Nakagawa et al. into the system of Chu in view of Roberts et al. The motivation would be to have the more suitable gain and phase characteristics when the signals are summed (column 2, lines 32-42 of Nakagawa et al.).

***Response to Arguments***

11. Applicant's arguments with respect to claim 1-12 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parul Gupta whose telephone number is 571-272-5260. The examiner can normally be reached on Monday through Thursday, from 9:30 AM to 7 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PHG  
9/11/06



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